

SC12865TH

**METHOD AND APPARATUS FOR DYNAMIC PREFETCH
BUFFER CONFIGURATION AND REPLACEMENT**

Abstract of the Invention

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A memory controller and method thereof configures a prefetch buffer dynamically for interfacing between multiple bus masters of different burst support and multiple memories having different characteristics. A line size of at least a portion of the prefetch buffer is
10 modified based upon the memory controller receiving a read request from one of the bus masters. An adaptive method to optimally replace prefetch buffer lines uses prioritized status field information to determine which buffer line to replace.